UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,583	11/12/2003	James G. Blencoe	1217/24517	6674

4859 7590 10/17/2007

MACMILLAN SOBANSKI & TODD, LLC
ONE MARITIME PLAZA FIFTH FLOOR
720 WATER STREET
TOLEDO, OH 43604-1619

EXAMINER	
LEUNG, JENNIFER A	

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
10/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/706,583	BLENCOE ET AL.	
	Examiner	Art Unit	
	Jennifer A. Leung	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 32-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 32-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment submitted on July 20, 2007 has been received and carefully considered. Claims 12-31 are cancelled. Claims 32-39 are newly added. Claims 1-11 and 32-39 are under consideration.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11, 32-37 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Mower (US 2,630,371).

Please note that the "system" claims are treated as "apparatus" claims.

Regarding claims 1 and 2, Mower (FIG. 4) discloses an apparatus comprising: a first reaction chamber (i.e., tank **31**) and a second reaction chamber (tank **32**). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim, *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969); and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Thus, in claim 1, the limitations with respect to "a gas stream containing carbon dioxide", the reaction occurring in the first reaction chamber "for reacting a metal silicate with a caustic material to produce a hydroxide of

the metal", the reaction occurring in the second reaction chamber "for contacting the metal hydroxide with the gas stream containing the carbon dioxide," and the "carbonate of the metal" produced by the apparatus, add no further patentable weight to the claim. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Similarly, in claim 2, the recitation that "the gas stream is a flue gas" adds no further patentable weight to the claim.

Regarding claim 3, Mower (FIG. 2) discloses an apparatus comprising: a reactor (i.e., tank **10**). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969), and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Thus, the "metal silicate", the "carbon dioxide", the reaction occurring within the reactor "for converting the metal silicate to a metal carbonate and silica with the use of a caustic material, and with the use of the carbon dioxide," and the "metal carbonate and silica" produced by the apparatus, have not been given patentable weight. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claim 4, the apparatus of Mower structurally meets the claim because the

metal silicate feedstock of magnesium silicate and the metal carbonate product of magnesite are not considered elements of the apparatus.

Regarding claims 5 and 6, the apparatus of Mower structurally meets the claims because the respective purity levels of the magnesite and silica products are considered a process limitation, and the magnesite and silica products are not considered an element of the apparatus.

Regarding claim 7, the apparatus of Mower structurally meets the claim because the carbon dioxide reactant is not considered an element of the apparatus.

Regarding claims 8, 10 and 11, Mower (FIG. 2) discloses an apparatus comprising: a reactor (i.e., tank **10**) and apparatus for removing a useful metal (i.e., primary separation **18**, secondary separation **21**), said apparatus being located prior to and subsequent to the reactor.

The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969), and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Thus, the "rock containing the useful metal and a metal silicate", the "carbon dioxide", the reaction occurring within the reactor "for converting the metal silicate to a metal carbonate, with the use of a caustic material, and with the use of the carbon dioxide", the "metal carbonate" produced by the apparatus, and the "useful metal" produced by the apparatus, add no further patentable weight to the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of

performing the intended use, then it meets the claim.

Regarding claim 9, the apparatus of Mower meets the claim because the rock feedstock of serpentine and the useful metal of magnetite are not considered elements of the apparatus.

Regarding claims 32, 34-37 and 39, the recitations with respect to the metal carbonate, the carbon dioxide and the useful metal add no further patentable weight to the apparatus claims, since expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim, *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969), and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). In any event, it is further noted that Mower discloses a source of carbon dioxide comprising a gas stream containing carbon dioxide (e.g., via pipe **13**; see column 3, lines 6-11).

Regarding 33, Mower discloses that the first and second reaction chambers are located in different reactors (i.e., as defined by separate vessels **31** and **32**; see FIG. 4).

Instant claims 1-11, 32-37 and 39 structurally read on the apparatus of Mower.

3. Claims 1-7, 32, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Donaldson (US 3,112,994).

Please note that the "system" claims are treated as "apparatus" claims.

Regarding claims 1 and 2, Donaldson (FIG. 1) discloses an apparatus comprising: a first reaction chamber (i.e., a first compartment **40**) and a second reaction chamber (i.e., a second compartment **40**). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim, *Ex parte*

Thibault, 164 USPQ 666, 667 (Bd. App. 1969); and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Thus, in claim 1, the limitations with respect to "a gas stream containing carbon dioxide", the reaction occurring in the first reaction chamber "for reacting a metal silicate with a caustic material to produce a hydroxide of the metal", the reaction occurring in the second reaction chamber "for contacting the metal hydroxide with the gas stream containing the carbon dioxide," and the "carbonate of the metal" produced by the apparatus, add no further patentable weight to the claim. Similarly, in claim 2, the recitation that "the gas stream is a flue gas" adds no further patentable weight to the claim. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claim 3, Donaldson discloses an apparatus comprising: a reactor (i.e., the vessel shown in FIG. 1). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Therefore, the "metal silicate", the "carbon dioxide", the reaction occurring within the reactor "for converting the metal silicate to a metal carbonate and silica with the use of a caustic material, and with the use of the carbon dioxide," and the "metal carbonate and

silica" produced by the apparatus have not been given patentable weight. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claim 4, the apparatus of Donaldson structurally meets the claim because the metal silicate feedstock of magnesium silicate and the metal carbonate product of magnesite are not considered elements of the apparatus.

Regarding claims 5 and 6, the apparatus of Donaldson structurally meets the claims because the respective purity levels of the magnesite and silica products are considered a process limitation, and the magnesite and silica products are not considered an element of the apparatus.

Regarding claim 7, the apparatus of Donaldson structurally meets the claim because the carbon dioxide reactant is not considered an element of the apparatus.

Regarding claims 32, 34 and 35, the recitations with respect to the metal carbonate and the carbon dioxide add no further patentable weight to the apparatus claims, since expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim, *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969), and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963).

Instant claims 1-7, 32, 34 and 35 structurally read on the apparatus of Donaldson.

4. Claims 1-11, 32-37 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Scofield et al. (US 1,494,029).

Please note that the "system" claims are treated as "apparatus" claims.

Regarding claims 1 and 2, Scofield et al. discloses an apparatus comprising: a first reaction chamber (i.e., labeled "autoclave"; see figure) and a second reaction chamber (i.e., labeled "carbonator"; see figure). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim, *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969); and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Therefore, in claim 1, the limitations with respect to "a gas stream containing carbon dioxide", the reaction occurring in the first reaction chamber "for reacting a metal silicate with a caustic material to produce a hydroxide of the metal", the reaction occurring in the second reaction chamber "for contacting the metal hydroxide with the gas stream containing the carbon dioxide," and the "carbonate of the metal" produced by the apparatus add no further patentable weight to the claim. Similarly, in claim 2, the recitation that "the gas stream is a flue gas" adds no further patentable weight to the claim. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In any event, Scofield (see figure) further discloses that the first reaction chamber (i.e., the autoclave) is used for reacting a metal silicate (i.e., feldspar) with a caustic material (i.e., caustic potash), and the second reaction chamber (i.e., the carbonator) is used for contacting the product stream from the first reaction chamber with a gas stream containing carbon dioxide.

Regarding claim 3, Scofield et al. discloses an apparatus comprising: a reactor (i.e., the "autoclave"; the "carbonator"; see Figure). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Therefore, the "metal silicate", the "carbon dioxide", the reaction occurring within the reactor "for converting the metal silicate to a metal carbonate and silica with the use of a caustic material, and with the use of the carbon dioxide," and the "metal carbonate and silica" produced by the apparatus add no further patentable weight to the claim. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In any event, Scofield et al. (see figure) further discloses a supply of metal silicate (i.e., feldspar); a source of carbon dioxide (i.e., carbon dioxide from a carbon dioxide plant), a metal carbonate product (i.e., at the calcium carbonate storage, to further treatment or sales; at the potassium bi-carbonate storage, to sales) and a silica product (i.e., at the silica storage, to sales).

Regarding claim 4, the apparatus of Scofield et al. structurally meets the claim because the metal silicate feedstock of magnesium silicate and the metal carbonate product of magnesite are not considered elements of the apparatus.

Regarding claims 5 and 6, the apparatus of Scofield et al. structurally meets the claims because the respective purity levels of the magnesite and silica products are considered a process

limitation, and the magnesite and silica products are not considered an element of the apparatus.

Regarding claim 7, the apparatus of Scofield et al. structurally meets the claim because the carbon dioxide reactant is not considered an element of the apparatus.

Regarding claims 8, 10 and 11, Scofield et al. (see figure) discloses an apparatus comprising: a reactor (i.e., the "autoclave", the "carbonator"); and apparatus for removing a useful metal from a rock (i.e., crushers and screens located prior to the reactor; also, rotary vacuum filters located subsequent to the reactor). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Therefore, the "rock containing the useful metal and a metal silicate", the "carbon dioxide", the reaction occurring within the reactor "for converting the metal silicate to a metal carbonate, with the use of a caustic material, and with the use of the carbon dioxide", the "metal carbonate" produced by the apparatus, and the "useful metal" produced by the apparatus, add no further patentable weight to the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In any event, Scofield et al. further discloses a supply of rock containing a useful metal and a metal silicate (i.e., feldspar); a source of carbon dioxide (i.e., carbon dioxide, from a carbon dioxide plant), a stream of metal carbonate product (i.e., at calcium carbonate storage, to

further treatment or sales; at potassium bi-carbonate storage, to sales), and a stream of useful metal product (i.e., at alum and aluminum sulfate storage, to sales; at silica storage, to sales).

Regarding claim 9, the apparatus of Scofield et al. meets the claim because the rock feedstock of serpentine and the useful metal of magnetite are not elements of the apparatus.

Regarding claim 32, 34 and 36, the recitations with respect to the "metal carbonate" (a produced of the apparatus) adds no further patentable weight to the apparatus claims, since expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963).

Regarding claim 33, the first and second reaction chambers are located in different reactors (i.e., as defined by the separate autoclave and carbonator; see Figure).

Regarding claims 35 and 37, the recitations with respect to the "carbon dioxide" adds no further patentable weight to the apparatus claims, since expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). In any event, Scofield et al. further discloses a source of carbon dioxide comprising a gas stream containing carbon dioxide (e.g., as produced from the carbon dioxide plant; see figure).

Regarding claim 39, the recitation with respect to the "useful metal" adds no further patentable weight to the apparatus claims, since expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963).

Instant claims 1-11, 32-37 and 39 structurally read on the apparatus of Scofield et al.

5. Claims 8-11 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Dunn, Jr. (US 3,699,206).

Please note that the "system" claims are treated as "apparatus" claims.

Dunn, Jr. discloses an apparatus comprising: a reactor **1** and an apparatus for removing a useful metal from a rock comprising a magnetic apparatus (i.e., a conventional magnetic separator, not shown; see column 4, lines 22-27); said magnetic apparatus being located subsequent to the reactor, or prior to the reactor (i.e., in the case that the magnetic fraction is recycled to the reactor **1**). The expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Therefore, the "rock containing the useful metal and a metal silicate", the "carbon dioxide", the reaction occurring within the reactor "for converting the metal silicate to a

metal carbonate, with the use of a caustic material, and with the use of the carbon dioxide", the "metal carbonate" produced by the apparatus, and the "useful metal" produced by the apparatus, add no further patentable weight to the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Instant claims 8-11 and 36-39 structurally read on the apparatus of Dunn, Jr.

Response to Arguments

6. Applicant's arguments filed July 20, 2007 have been fully considered but they are not persuasive.

Comments regarding the examination of the "system" claims as "apparatus" claims.

Beginning at page 5, second paragraph,

> "Applicants respectfully disagree with the Examiner's approach. The Examiner is requested to make of record any, supporting authority for treating system claims as apparatus claims."

Please note that section 101 of title 35, United States Code, provides:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Thus, the instantly recited "system" claims must fall into one of the above four categories of patentable subject matter. Looking to the body of instantly recited "system" claims, claim 1 recites "a first reaction chamber" and "a second reaction chamber"; claim 2 recites "a reactor"

and claim 8 recites "a reactor" and "apparatus for removing the useful metal from the rock." Thus, the instantly recited "system" claims are clearly directed toward an apparatus or machine.

Please note that a claimed invention may be a combination of devices that appear to be directed to a machine and one or more steps of the functions performed by the machine. Such instances of mixed attributes, although potentially confusing as to which category of patentable subject matter the claim belongs, does not affect the analysis to be performed by USPTO personnel. Note that an apparatus claim with process steps is not classified as a "hybrid" claim; instead, it is simply an apparatus claim including functional limitations. See, e.g., *R.A.C.C. Indus. v. Stun-Tech, Inc.*, 178 F.3d 1309 (Fed. Cir. 1998) (unpublished).

As such, the Examiner maintains that the "system" claims have been properly examined as "apparatus" claims. And furthermore, according to MPEP, sections 2114 and 2115,

APPARATUS CLAIMS MUST BE STRUCTURALLY DISTINGUISHABLE FROM THE PRIOR ART

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

MANNER OF OPERATING THE DEVICE DOES NOT DIFFERENTIATE APPARATUS CLAIM FROM THE PRIOR ART

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

MATERIAL OR ARTICLE WORKED UPON DOES NOT LIMIT APPARATUS CLAIMS

"Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)); *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967). Note that this line of cases is limited to claims directed to machinery which works upon an article or material in its intended use.

At page 6, second paragraph, Applicants further refer to *Georgia-Pacific Corp. v. United States Gypsum Co.*, 52 USPQ 2d 1590, with respect to the use of "system" claims. However, it is noted that the "system" claims being referred to in this court decision concern an article of manufacture, and not a machine or apparatus. In particular, claim 1 of US 4,647,496, as referred to in the court decision, recites:

> An exterior insulation system for a building comprising a glass mat-faced gypsum support surface, insulating material having an inner surface and an outer surface, the inner surface of which is adhered to said support surface by an adhesive material, the insulating material being substantially free of channels penetrating therethrough and between said inner and outer surfaces, and an exterior finishing material overlying the outer surface of said insulating material.

The citation is therefore not relevant in the instant situation.

Comments regarding the rejection of claim 1-11 under 35 U.S.C. 102(b) as being anticipated by Mower (US 2,630,371).

At page 6 (last paragraph) to page 7 (second paragraph), Applicants generally argue that the apparatus of Mower fails to meet the instant claims, since Mower fails to disclose the claimed materials being worked upon by the apparatus. However, the Examiner maintains that the recitations with respect to the materials being worked upon by the apparatus imparts no further patentable weight to the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See also comments above.

Comments regarding the rejection of claims 1-7 under 35 U.S.C. 102(b) as being anticipated by Donaldson (US 3,112,994).

At page 7 (last paragraph) to page 8 (last paragraph), Applicants generally argue that the apparatus of Donaldson fails to meet the claims, since Donaldson fails to disclose the claimed materials being worked upon by the apparatus. However, the Examiner maintains that the recitations with respect to the materials being worked upon by the apparatus imparts no further patentable weight to the claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See also comments above.

Comments regarding the rejection of claims 1-11 under 35 U.S.C. 102(b) as being anticipated by Scofield et al. (US 1,494,029).

At page 9 (first paragraph) to page 10 (last paragraph), Applicants generally argue that the apparatus of Scofield et al. fails to meet the claims, since Donaldson fails to disclose the claimed materials (e.g., the specific types of metal silicates) being worked upon by the apparatus. However, the Examiner maintains that the recitations with respect to the materials being worked upon by the apparatus imparts no further patentable weight to the claims.

Applicant further argues that there is no suggestion in Scofield et al. of a system "for sequestering carbon dioxide gas from a gas stream." Again, the Examiner respectfully disagrees, since a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Also, a preamble is generally not accorded any patentable weight where it merely recites the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

* * *

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer A. Leung
October 10, 2007

Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700